

CLAIMS

1 30. (currently amended) A method for operating a fixed wireless loop system, comprising
2 the steps of:

3 receiving a request by a first terminal to establish a first communications link; and

4 allocating at least two temporal communication slots to said first [[to]] terminal to support said
5 first communications link when interference caused by and interference experienced by the first
6 communications link are acceptably low.

1 31. (previously presented) The method of claim 1 further comprising the steps of:

2 estimating said interference caused by said first communications link using previously-obtained
3 measurements of interference that other communications links experience from one another and from a
4 transmitter of said first terminal;

5 estimating said interference experienced by said first communications link using
6 previously-obtained measurements of interference that a receiver of said first terminal experiences from
7 said other communications links.

1 32. (previously presented) The method of claim 31 wherein the step of estimating said
2 interference caused by said first communications link and the step of estimating said interference
3 experienced by said first communications link comprises accessing a data base comprising data
4 indicative of mutual interference levels between every potential communications link within said fixed
5 wireless loop system.

1 33. (previously presented) The method of claim 32 wherein:

2 said fixed wireless loop system comprises a plurality of cells, each of which comprises a base
3 station and a multiplicity of terminals;

4 each communications link comprises a base station and one of said terminals within a same cell;
5 said first communications link is located in a first cell of said plurality;

6 at least one of said other communications links is located in a second cell of said plurality;

7 interference caused by said first communications link comprises interference experienced by said
8 at least one other communications link; and

9 said step of estimating said interference caused by said first communications link comprises:

10 obtaining an estimate of a signal-to-total-interference-ratio experienced by said one other
11 communications link from a cell controller controlling activities in said second cell, wherein said
12 estimate does not include interference caused by said first communications link;

13 obtaining, from said data base, data indicative of interference experienced by said one
14 other communications link as a result of communications between said first communications link; and

15 estimating interference experienced by a receiver of said one other communications link
16 using said estimate of said signal-to-total-interference-ratio and said data from said data base.

1 34. (previously presented) The method of claim 30 wherein a receiver of said first
2 communications link is located at a base station, and wherein the step of estimating said interference
3 caused by said first communications link comprises estimating said interference based on a receive beam
4 having notches to attenuate interference from at least some of said other communications links.

1 35. (previously presented) The method of claim 34 wherein said notches are characterized
2 by a depth indicative of their ability to attenuate a signal, and wherein said step of estimating said
3 interference caused by said first communications link further comprises using an estimated notch depth.

1 36. (previously presented) The method of claim 34 wherein said notches are characterized
2 by a depth indicative of their ability to attenuate a signal, and wherein said step of estimating said
3 interference caused by said first communications link further comprises using a calculated notch depth.

1 37. (previously presented) A method for allocating a time slot to a first communications link
2 for wireless transmissions, wherein a second communications link also used the allocated time slot for
3 wireless transmissions, comprising:

4 accessing first archived data pertaining to mutual interference between said first communications
5 link and said second communications link;

6 accessing second archived data pertaining to the interference level experienced by said second
7 communications link before said first communications link is established; and

8 allocating said time slot to said first communications link if the interference caused by and
9 interference experienced by said first communications link are less than a predetermined level selected to
10 provide suitable reception, as determined from said accessed first data and second archived data.

1 38. (currently amended) An article comprising:

2 a processor; and

3 a computer readable storage medium having computer-readable program code embodied therein
4 for causing a processor to process a request by a terminal to communicate with a base station, the
5 program code comprising:

6 code segment for causing said processor to search for a suitable uplink time slot in which
7 said terminal transmits to said base station, wherein said suitable uplink time slot is characterized by:

8 a first level of interference interference experienced at a receiver at said base station, said
9 first level of interference allowing for satisfactory reception, and

10 a second level of interference interference experienced at other on-air base stations,
11 wherein:

12 said second level of interference interference is caused by said requesting terminal's
13 transmission; and

14 said second level of interference interference allows for acceptable reception.

1 39. (currently amended) The article of claim 38 further comprising code segment for
2 causing said processor to search for a suitable downlink time slot in which said base station transmits to
3 said terminal, wherein said suitable downlink time slot is characterized by:

4 a third level of interference interference experienced at a receiver at said terminal, said third level
5 of interference allowing for satisfactory reception, and

6 a fourth fourth level of interference interference experienced at other on-air terminals, wherein:

7 said third level of interference interference is caused by said base station's transmission;
8 and

9 said second level of interference interference allows for acceptable reception.

1 40. (new) The method of claim 30 wherein:

2 the first communications link comprises an uplink beam and a downlink beam; and

3 the at least two temporal communication slots comprise at least one temporal communication slot
4 in the uplink beam and at least one temporal communication slot in the downlink beam.

1 41. (new) The method of claim 30 wherein allocating the at least two temporal
2 communication slots comprises the steps of:

3 determining that the interference caused by the first communications link is acceptably low; and

4 determining that the interference experienced by the first communications link is acceptably low.

1 42. (new) The method of claim 30 wherein:
2 the interference caused by the first communications link is interference to one or more other
} 3 communications links in the system; and
4 the interference experienced by the first communications link is interference from one or more
5 other communications links in the system.

1 43. (new) The method of claim 42 wherein each other communications link corresponds to a
2 base station in the system different from the base station corresponding to the first communications link.